ICEFIRE

10.4” Mobile Clinic Assistant

- 10.4” TFT XGA LCD
- Intel® Atom™ D525 dual core platform
- Powered by Windows ® Embedded Standard 7 P
- Dual-mode input (Digitizer + Multi-Resistive Touch)
- Dual hot swappable battery
- 1D/2D barcode reader, RFID reader, smart card reader and fingerprint reader
- Bluetooth, Wi-Fi, 3.75G wireless

TAIWAN EXCELLENCE 2012

3.75G/HSUPA | Bluetooth | Wi-Fi | RFID | Camera

Touchscreen | Digitizer Screen | Fanless | 1D Barcode Scanner | 2D Barcode Scanner | Fingerprint Reader | SCR | Intel Intelligent Systems Alliance | F3 One Key Recovery iEi symantec.

Mobile Clinic Assistant Applications

Retrieve patient data at bedside for optimal point-of-care treatment.

Instant access to patient medical history for real-time diagnosis.

Accurately capture and record patient symptoms during an emergency.

Increase productivity and decrease opportunities for error through documentation directly at point-of-care.

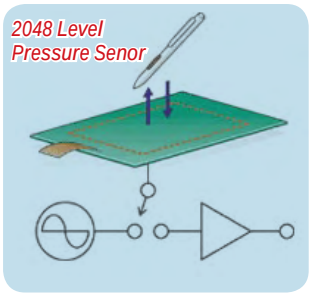
ICP Deutschland GmbH – Tel. 07121-14323-0 – Fax 07121-14323-90 – www.icp-deutschland.de

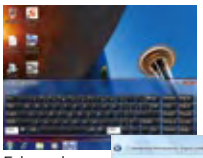
Dual-Mode Input

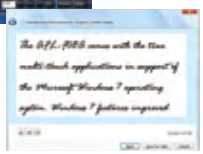
Along with Windows® 7 digitizer support and dual-mode input support, the ICEFIRE features both WACOM digitizer and traditional resistive touch input with auto-sensing and auto-switching. When a digitizer pen moves close to the screen of the ICEFIRE, the digitizer automatically takes effect and switches off resistive touch input mode.

The digitizer is a more accurate and sensitive input method that can detect stylus pressure, speed, and angle. This feature is suitable for a clinician to note patient's vital signs. Another key benefit of the digitizer is to prevent mis-touch. A clinician can use the digitizer pen to write accurate prescriptions without the worry of input errors. The working principles of the EMR® digitizer are as follows:

- The tablet surface incorporates a sensor board that detects the pen's movement.
- Weak energy is induced in the pen's resonant circuit by a magnetic field generated by the sensor board surface.
- The pen's resonant circuit then makes use of this energy to return a magnetic signal to the sensor board surface.




Enhanced on-screen keyboard


Hand-writing recognition

Dual input modes combined with acceleration keys make computing flexible and convenient for healthcare staff working in many different applications.

Digitizer Mode

Resistive Touch Mode

The ICEFIRE also provides Windows® 7 featured multi-touch, gesture, and hand-writing recognition.

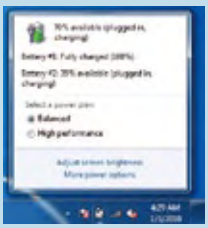
Multi-Touch Support

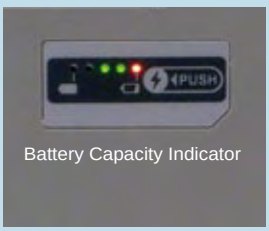
Dual Battery Pack

Each battery pack, with medical-grade certifications, provides 11.1 V 1880 mAh capacity and supports a hot swappable function. When one battery is removed, the system automatically switches power consumption to the other battery. With an additional battery pack and the hot swappable feature, the ICEFIRE ensures non-stop point-of-care, 24 hours a day, every day.

Each battery pack has capacity indicators. Besides these visual indicators, operating systems like Windows® 7 will also display information of available batteries and capacity on the desktop.

The ICEFIRE consumes the battery with lower power capacity first. When charging, the ICEFIRE charges the battery with higher power capacity first then the other.





Battery Capacity Indicator

Security and Access Control

Combined with Windows® 7 Embedded security management feature, the built-in fingerprint reader allows hospitals to control access priorities.

The optional USB interface smart card reader supports identity verification and makes the ICEFIRE an ideal access control device for transaction-based medical cloud-computing systems.

Optional Smart Card Reader (SCR)

Fingerprint Reader

Ergonomic Design

IP64 Compliant and Easy-to-Clean Plastic Housing

Ergonomic Handlebar and Hinge Stand

Handle design for easy carry

Ergonomic Grip Handle

Desk-mount stand for ease of use

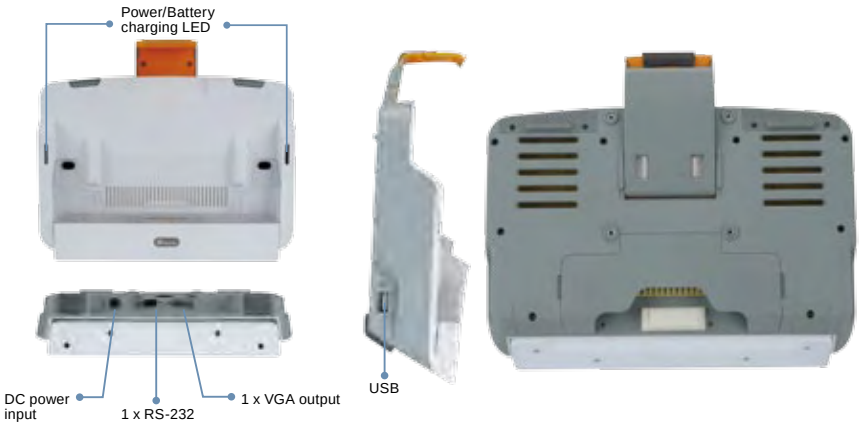
Medical-grade Certification Approved

EN 60601-1
EN 60950

Antibacterial Housing

Slim and Lightweight Design

Flexible Installation Design



The ICEFIRE Docking Station (ICEFIRE-DS) provides power to one docked ICEFIRE and two plug-in battery packs simultaneously.

WOW (Workstation on Wheels) Installation

The combination of ICEFIRE and ICEFIRE Docking Station is an ideal solution for a healthcare cart:

- Desktop, swing arm, or VESA mounting options
- Expanded I/O connects to peripherals such as keyboard/ mouse, printer, barcode scanner, or medical equipments
- Easy to draw out and draw back
- Convenient bedside healthcare
- Power and battery options support uninterrupted point-of-care

Wall Mount Installation

Wall-mount Installation

ICEFIRE Car Dock (Rugged Docking Station)

With a metal snap on design, the ICEFIRE car dock is made to withstand harsh vehicle environments such as strong vibrations.

Part No. : ICEFIRE-T10A-DSRG-R10

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ICEFIRE-ET

Enterprise Tablet PC

- 10.4” TFT 350 cd/m² XGA LCD with multi resistive touch
- Intel® Atom™ D525 dual core 1.8 GHz platform
- Powered by Windows® Embedded Standard 7 P
- 3-megapixel camera with LED flash
- Bluetooth, Wi-Fi, Ethernet LAN
- Dual hot swappable battery
- Optional docking station / smart card reader

Bluetooth | Wi-Fi | Touchscreen | Camera | Fingerprint Reader | SCR | Intelligent Systems Alliance

Applications

Enterprise Mobility

Using mobile devices helps save your time and increases productivity. The right technology enables the flow of information between handheld devices used by your workers and your core business systems. The ICEFIRE-ET utilizes wireless local area networks (WLANs) and management software to increase the data transfer speed and optimize your working mobility in logistics and warehousing environments.

Inspection

The ICEFIRE-ET is most suitable for inspection applications. It features an ergonomic and light weight design that is easy to carry around on-the-job. It also offers exceptional functions that allow information to be stored in real-time and help businesses to provide transparent inspection and accurate information.

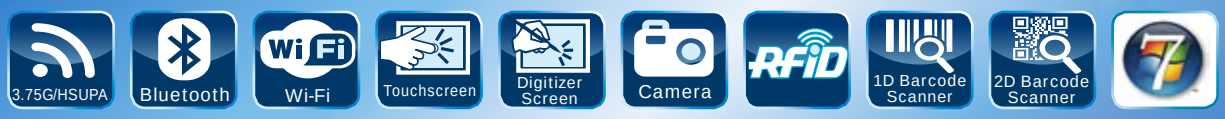
Logistics and Warehouse

Enhancing on-duty staff work force and mobility, the tablet PC brings more efficiency to the workplace. All data and information are saved in the ICEFIRE-ET and can be transferred via wireless communication providing real-time responses without any loss.

ICEFIRE 2

10.4" Mobile Clinic Assistant

- 10.4” TFT XGA LCD
- Intel® Atom™ N2800 1.86GHz processor
- Powered by Windows® Embedded Standard 7 P
- Built-in 8GB mSATA storage
- Bluetooth, Wi-Fi, 3.75G wireless with GPS
- 1D/2D barcode reader, 13.56MHz RFID reader
- Dual-mode input (Digitizer + Multi-Resistive Touch)
- Dual hot swappable battery
- Dual Camera:
  1.3-megapixel front camera
  3.0-megapixel rear camera

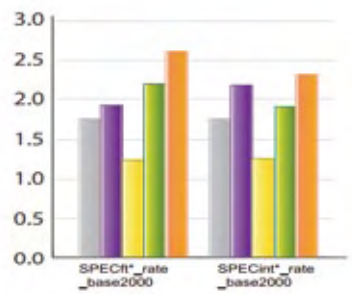


High Performance, Low Power Consumption CPU for Fanless Design

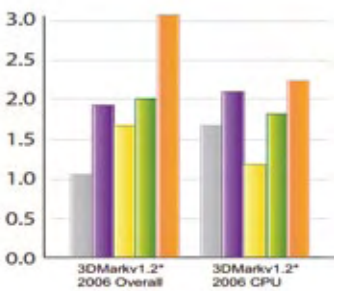
The new generation Intel® Atom™ N2800 processor provides reduced power consumption with high performance suitable for mobile devices in industrial computing. Benefits include:

- Display options include two digital ports supporting extra LVDS/HDMI/VGA interface
- Two times improved graphics with two HD video support
- Faster memory up to DDR3 1066
- Support fan-less design

Processor Performance



Graphics Performance



Intel® Atom™ processor D525
Intel® Atom™ processor D2700
Intel® Atom™ processor N455
Intel® Atom™ processor N2600
Intel® Atom™ processor N2800

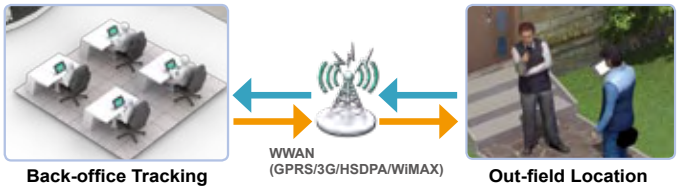
CPU Specification Comparison

	ICEFIRE	ICEFIRE2	
Core Functionality	1.67 GHz (N455) 1.8 GHz (D525)	1.6 GHz (N2600) 1.85 GHz (N2800)	
Process Technology / Packing Size	45-nm / 22x22	32-nm / 22x22	
Graphics Base Frequency	200 MHz (N455) 400 MHz (D525)	400 MHz (N2600) 640 MHz (N2800)	
Memory Technology	DDR3 667 (N455) DDR3 800 (D525)	DDR3 800 (N2600) DDR3 1066 (N2800)	
Max Memory Capacity	2GB (N455) 4GB (D525)	2GB (N2600) 4GB (N2800)	
CPU / TDP	D525 / 13W	N2600 / 3.5W	N2800 / 6.5W
Chipset / TDP	ICH8M / 2.4W	NM10 / 1.5W	NM10 / 1.5W
Power kit / TDP	Power / 7W	Power / 3W	Power / 3W
Total	22.4W	8W	11W

GPS Application : Position & Location

Together with wireless network technology (such as 3G), the built-in GPS tracks the exact location of the ICEFIRE users:

- Users can be located on a map to reference his/her own location in relation to other landmarks. With location based services, mobile workers can locate important destinations such as gas stations and customers in an unknown territory.
- Location information obtained from the GPS can be transmitted to the backend office through wireless broadband connectivity, allowing employees to be tracked while they are on the move.



mSATA Storage

mSATA SSD leverages the speed and reliability of the SATA interface, providing high-performance and cost-effective storage for smaller devices and enabling more compact integration into a wide variety of applications. Compared to the traditional HDD and CF card storage, mSATA has the following advantages:

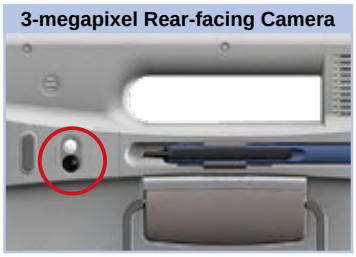
- Fast re-write capability
- Able to withstand vigorous vibrations
- Small in size

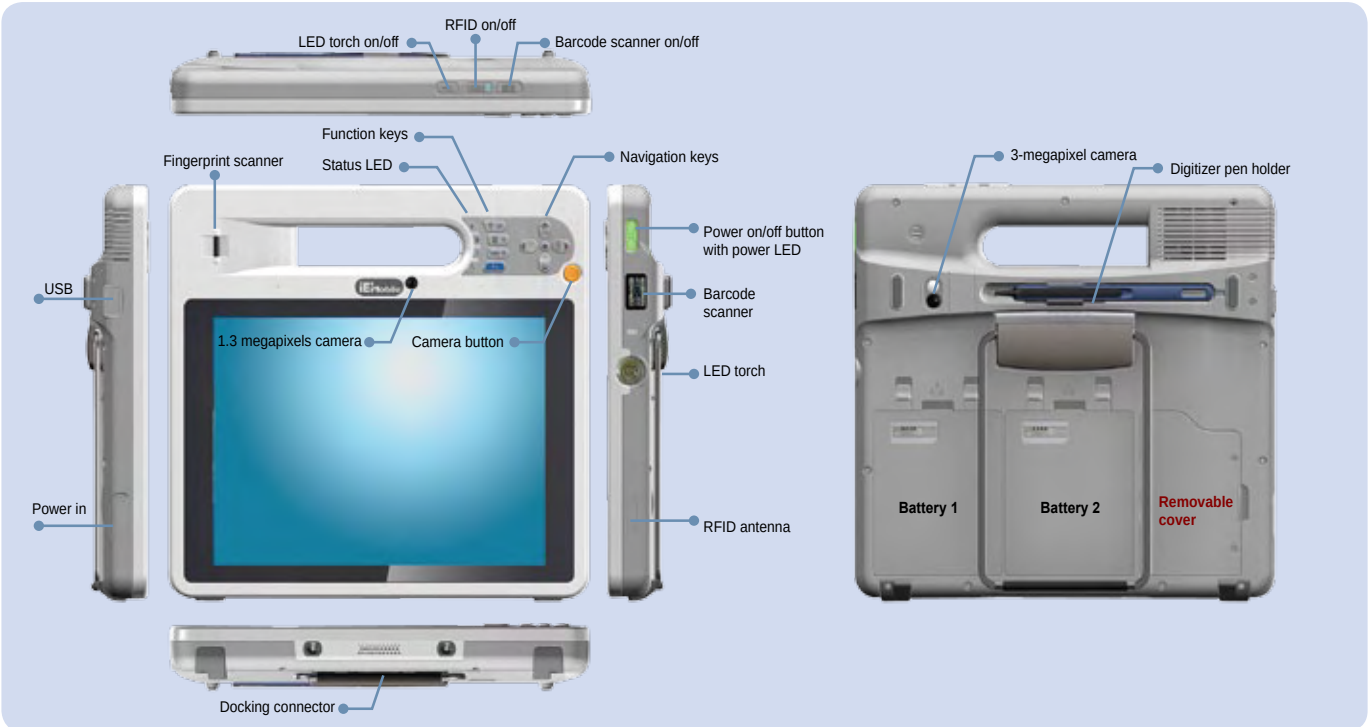
Flexible Module Expansion Slot

Located at the back of the ICEFIRE 2, the module expansion slot is designed for easy and fast exchange of a variety of modules, including RFID readers. This design brings functional versatility to the ICEFIRE 2 to serve a diverse range of applications.

Integrated Dual Camera

The ICEFIRE 2 is integrated with two camera, one on the front and one on the rear. The 3-megapixel rear-facing camera can be utilized for photographic and video documentation purposes. The 1.3-megapixel front-facing camera enables unified video communications wirelessly.





Daily Patient Record Case Study

Background

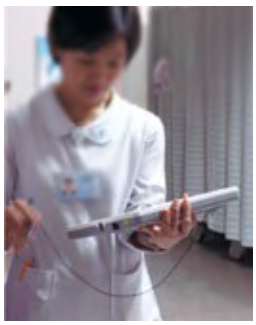
A major Taiwan-based hospital with the second largest patient flow in the country has been changing its paper-based recording system into electronic recording systems. With 1,096 beds, approximately 4,000 outpatient visits per day and a bed occupancy rate of 85%, emergency response and after patient care are the most important services provided by this hospital.

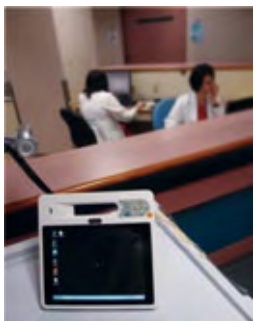
Challenge

Previously, nurses relied on desktop computers and paper records to monitor patients' daily health information such as food intake, body temperature, and output. Daily records were recorded on a notebook located at each patients' bedside. Nurses found this paper-based method to be inconvenient as the records were easily misplaced or lost. Furthermore, hand written information were often misunderstood or hard to read.
The hospital realized it was time to improve its daily patient recording system with an electronic-based system. The institution was in search for a mobile computing solution to enhance nursing efficiency and accuracy.

Solution

The ICEFIRE 10.4" Mobile Clinic Assistant offers a mobile platform in which nurses can input and store patient information instantly. The built-in hand writing recognition function and the digitizer technology allow nurses to easily write on the tablet surface without mis-touch. In addition, the barcode and RFID readers are very helpful when it comes to identifying patient and medication. The tablet PC can be connected to the hospital's medical database through Wi-Fi, and patient records can be updated or retrieved safely and efficiently.





Benefits

- 10.4" screen for easy viewing and operation.
- Dual-mode input with digitizer technology and resistive touch for hand writing recognition and mis-touch prevention.
- Built-in 1D/2D barcode and 13.56MHz RFID reader for automatic identification.
- Dual hot swap battery for increased device operation time.
- Ergonomic design for easy carry and easy use.

Flexible Installation Design

Move the stand downward. Slide the two latches again to lock the stand into place

Secure the holder onto the top of the docking station by inserting four retention screws

Mounting with Docking Station

The optional docking station of the ICEFIRE2-T10 can be installed on any VESA compliant mounting device. The VESA mount retention screw holes of the docking station are shown in 483H746HFigure 3-13. Follow the instructions in the user manual of the mounting device to mount the docking station securely.

VESA Mounting Retention Screw Holes (Docking Station)

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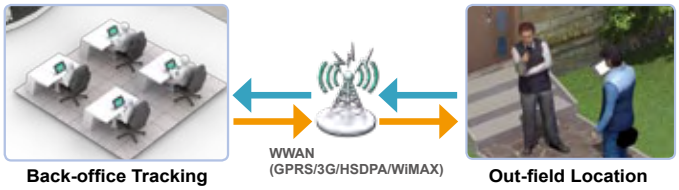

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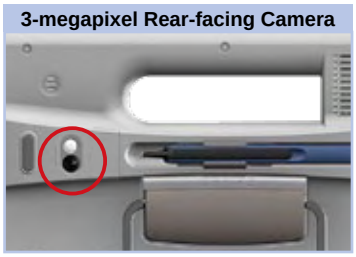

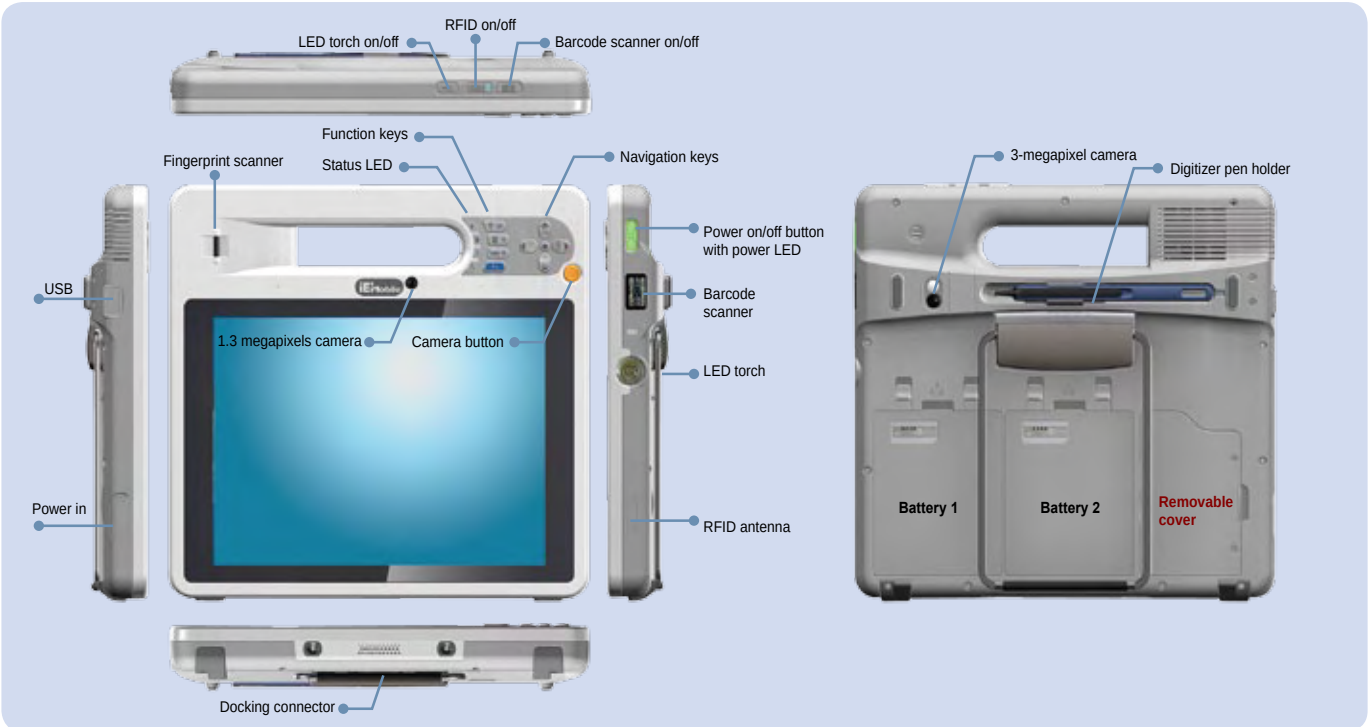

Ordering Information

Part No.	Description
ICEFIRE: Intel® Atom™ D525 CPU with Windows® Embedded Standard 7	
ICEFIRE-T10A-HU/2G-32S-R11	10.4" TFT-LCD 350 cd/m² XGA Industrial Mobile Clinical Assistant with Dual-core Intel® Atom™ D525 1.8GHz CPU, Multi-Touch and Digitizer Dual Mode, 2GB DDR3 RAM, HSUPA, 802.11a/b/g/n Wireless, Bluetooth, 1D/2D Barcode Scanner, RFID, 3-megapixel Camera, LED Torch, 32GB SSD, WS7P RoHS
ICEFIRE-T10A-TR/2G-32S-R10	10.4" TFT-LCD 350 cd/m² XGA Industrial Mobile Clinical Assistant with Dual-core Intel® Atom™ D525 1.8GHz CPU, Resistive Multi-Touch, 2GB DDR3 RAM, 802.11a/b/g/n Wireless, Bluetooth, 1D/2D Barcode Scanner, RFID, 3-megapixel Rear Camera, LED Torch, 32GB SSD, WS7P, RoHS
ICEFIRE-T10A-ET/2G-32S-R10	10.4" TFT-LCD 350 cd/m² XGA Industrial Mobile Clinical Assistant with Dual-core Intel® Atom™ D525 1.8GHz CPU, Resistive Multi-Touch, 2GB DDR3 RAM, 802.11a/b/g/n Wireless, Bluetooth, 32GB SSD, WS7P RoHS
ICEFIRE 2: Intel® Atom™ N2800 CPU with Windows® Embedded Standard 7	
ICEFIRE2-T10-HU-R10	10.4" TFT-LCD 350 cd/m² XGA Industrial Mobile Clinical Assistant with Dual-core Intel® Atom™ N2800 1.86GHz CPU, Multi-Touch and Digitizer Dual Mode, 4GB DDR3 RAM, HSUPA, 802.11b/g/n Wireless, Bluetooth, 1D/2D Barcode Scanner, RFID, 3M Pixel Rear Camera, 1.3-megapixel Front Camera, LED Torch, 8GB mSATA, WS7P RoHS
ICEFIRE2-T10-TR-R10	10.4" TFT-LCD 350 cd/m² XGA Industrial Mobile Clinical Assistant with Dual-core Intel® Atom™ N2800 1.86GHz CPU, Resistive Multi-Touch, 4GB DDR3 RAM, 802.11b/g/n Wireless, Bluetooth, 1D/2D Barcode Scanner, RFID, 3-megapixel Rear Camera, 1.3-megapixel Front Camera, LED Torch, 8GB mSATA, WS7P, RoHS
ICEFIRE2-T10-ET-R10	10.4" TFT-LCD 350 cd/m² XGA Industrial Mobile Clinical Assistant with Dual-core Intel® Atom™ N2800 1.86GHz CPU, Resistive Multi-Touch, 4GB DDR3 RAM, 802.11b/g/n Wireless, Bluetooth, 8GB mSATA, WS7P RoHS

Model Variations

Part No.	Digitizer	Touch	Wireless	Bluetooth	3.75G	GPS	Barcode	RFID	Fingerprint Reader	Storage
ICEFIRE: Intel® Atom™ D525 CPU with Windows® Embedded Standard 7										
ICEFIRE-T10A-HU/2G-32S-R11	Digitizer	Resistive Multi-touch	802.11a/b/g/n	Ver. 2.1+EDR, Class 2	Qualcomm	N/A	1D/2D	RFID	Yes	32G SSD
ICEFIRE-T10A-TR/2G-32S-R10	N/A	Resistive Multi-touch	802.11a/b/g/n	Ver. 2.1+EDR, Class 2	N/A	N/A	1D/2D	RFID	Yes	32G SSD
ICEFIRE-T10A-ET/2G-32S-R10	N/A	Resistive Multi-touch	802.11a/b/g/n	Ver. 2.1+EDR, Class 2	N/A	N/A	N/A	N/A	N/A	32G SSD
ICEFIRE 2: Intel® Atom™ N2800 CPU with Windows® Embedded Standard 7										
ICEFIRE2-T10-HU-R10	Digitizer	Resistive Multi-touch	802.11b/g/n	Ver. 3.0+EDR Class 2	Qualcomm	Option	1D/2D	RFID	Yes	8G mSATA
ICEFIRE2-T10-TR-R10	N/A	Resistive Multi-touch	802.11b/g/n	Ver. 3.0+EDR Class 2	N/A	Option	1D/2D	RFID	Yes	8G mSATA
ICEFIRE2-T10-ET-R10	N/A	Resistive Multi-touch	802.11b/g/n	Ver. 3.0+EDR Class 2	N/A	Option	N/A	N/A	N/A	8G mSATA

Packing List

Item	Part No.	HU	TR	ET
Digitizer Pen	7Z000-SU5E10S06AU00X-RS	•		
Stylus	43125-0002C0-00-RS		•	•
Battery Pack	31603-000016-RS	•	•	
Battery Pack-B	31603-000020-RS			•
Medical-grade Power Adapter (12V/60W)	63040-010060-020-RS	•	•	
Non-Medical-grade Power Adapter (12V/60W)	63040-010060-030-RS			•
User's Manual CD	7B000-000552-RS	•	•	•

Carrying Case

Docking Station

Smart Card Reader

Battery Pack

12V Power Adapter

19V Power Adapter

Digitizer Pen

Stylus

Optional Accessory List

Item	Part No.	Description
Docking Station	ICEFIRE-T10A-DSNM-R10	ICEFIRE Docking Station Without Docking Adapter, Normal type
	ICEFIRE-T10A-DSRG-R10	ICEFIRE Docking Station Without Docking Adapter, Rugged type
Docking Station Power Adapter	19B00-000288-00-RS	Standard power adapter for docking station
	19B00-000289-00-RS	Medical grade power adapter for docking station
	63040-290090-010-RS	Car cigarette power adapter for docking station
Smart Card Reader	ICEFIRE-T10A-SCR01-R10	USB 2.0 (Full Speed) Smart Card Reader Complies with ISO7816-1,2,3 for ICEFIRE-T10A
Battery Pack	31603-000016-RS	11.1V 1880 mAh Battery
Battery Pack-B	31603-000020-RS	11.1V 1880 mAh Battery, Black
Digitizer Pen	7Z000-SU5E10S06AU00X-RS	Digitizer Sensor Pen
Stylus	43125-0002C0-00-RS	Touch Pen
Carrying Case	7Z000-ICEFIRET10APOUCH-RS	Black, leather protective bag with shoulder strap